boceprevir. Total costs of AE and discontinuation were $10,443 and $3,736 for telaprevir and boceprevir treated groups, respectively. The results were not sensitive to variation in treatment practices and costs. **CONCLUSIONS:** The costs of treatment of cirrhotic non-responders during the first 16 weeks were estimated to increase by 18% over triple therapy costs due to AEs. These data indicate that the total cost per cure may be substantially higher than the drug costs and underscore the importance of evaluating total cost of HCV treatment when selecting new agents.

PIN58

DIRECT MEDICAL COSTS AND HEALTH CARE RESOURCE UTILIZATION ASSOCIATED WITH SELECTED ANTIBIOTIC TREATMENT PATHWAYS IN ACUTE BACTERIAL SKIN AND SKIN STRUCTURE INFECTIONS IN THE UNITED STATES

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OBJECTIVES: Current guidelines for the treatment of acute bacterial skin and skin structure infections (ABSSSI) recommend several treatment pathways based on the infection types and severity. The objective of this study is to establish the health care resource utilization (HRU) and costs associated with the most common patient treatment pathways in US. **METHODS:** The medical and pharmacy administrative claims of adult ABSSSI patients with continuous commercial or Medicare Advantage enrollment with Part D prescription drug coverage between 01 January 2009 and 31 December 2011 were extracted from a large national health plan affiliated with OptumInsight. The four most common treatment pathways were identified based on the evidences of antibiotics over the entire ABSSSI treatment course. All four pathways start with vancomycin IV use during a hospital stay. At discharge, patients followed one of four pathways: 1) continue IV vancomycin as an Outpatient Parenteral Antibiotic Therapy (OPAT); 2) switch to oral linezolid; 3) switch to daptomycin; or 4) switch to any oral antibiotic other than linezolid, clindamycin, or TMP-SMX. Health care resource utilization and costs were determined for each pathway. **RESULTS:** A total of 1418 patients met all of inclusion/exclusion criteria. The majority of patients either continued Vancomycin IV (46.5%) or switched to oral linezolid (41.4%) at discharge. Only about 12% of patients were switched to Daptomycin or other non-MRSA active oral antibiotics. The average ABSSSI-related total health care cost was $16,571 for the entire ABSSSI treatment. Total costs were comprised of $12,519 (75.5%) for inpatient cost, $201 (1.2%) for emergency department (ED) visits, $879 (5.3%) for outpatient treatment/office visits, and $1,015(6.1%) for pharmacy claims cost. The costs overall and in various locations of care varied by pathway. **CONCLUSIONS:** Inpatient treatment remains the largest component of total ABSSSI treatment cost. Utilization of linezolid and daptomycin increased the pharmacy or OPAT costs.

PIN59

COMPARISON OF THE HEALTH CARE COSTS AND UTILIZATIONS BETWEEN PATIENTS DIAGNOSED WITH THE HEPATITIS B VIRUS VERSUS THOSE WITHOUT

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OBJECTIVES: To examine the economic burden and health care utilizations of patients diagnosed with the hepatitis B virus (HBV) in the U.S. veteran population. **METHODS:** A retrospective database analysis was performed using the Veterans Health Administration (VHA) Medical SAS datasets from October 1, 2008 to September 30, 2012. Patients diagnosed with HBV were identified using International Classification of Disease 9th Revision Clinical Modification (ICD-9-CM 070.22, 070.23, 070.32, 070.33, V02,61) diagnosis codes. The first diagnosis date was defined as the index date. A group of patients of the same age, region, gender and index year but without HBV infection were identified and matched by baseline Charlson Comorbidity Index (CCI) as the comparison group. A 1-year continuous health plan enrollment was required before and after the index date for both groups. Study outcomes, including health care costs and utilizations, were compared between the HBV and comparator groups using 1:1 propensity score matching. **RESULTS:** A total of 9,718 patients were identified for the HBV and comparison cohorts. After applying a 1:1 matching, a total of 3,093 patients were matched from each cohort, and the baseline characteristics were proportionate. Patients diagnosed with HBV infection were more likely to report higher health care utilizations, including inpatient (28.74% vs. 3.3%, $p<0.01$), emergency room (25.67% vs. 8.3%, $p<0.01$), physician office (98.60% vs. 62.75%) and pharmacy visits (88.23% vs. 63.65%, $p<0.01$). The risk-adjusted health care costs were also higher for patients infected with HBV due to increased inpatient ($10,481 vs. $804, $p<0.01$), emergency room ($382 vs. $80, $p<0.01$), physician office ($4,635 vs. $1,678, $p<0.01$), and pharmacy visits ($1,166 vs. $398, $p<0.01$) resulting in higher total costs ($16,909 vs. $3,045, $p<0.01$) relative to the comparator cohort. **CONCLUSIONS:** During a period of 12 months, VHA patients diagnosed with HBV reported higher health care utilization and costs than their matched controls.

PIN60

A COMPARATIVE STUDY ON THE COST OF ANTIBIOTICS FOR THE YEARS 2011-2012 IN THREE GENERAL HOSPITALS OF GREECE

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OBJECTIVES: Since Greece came under the regime of IMF and signed the memorandum, several curtailments had to be made to various areas of the public sector. Drug treatment seems to be quite expensive. As part of the strict economic rules, Greek hospitals were obliged to reduce their health care costs. The pharmacy of each hospital incurred considerable weight of this attempt. One of its implemented actions was the drugs' price negotiation with the pharmaceutical companies. **METHODS:** In order to measure the effectiveness of this action, we performed a comparative study of the antibiotics used in 3 hospitals, PAGNI, Evaggelismos and Tzaneio. PAGNI and Evaggelismos are among the 5 biggest hospitals of Greece (pharmaceutical budget around 40M€) while Tzaneio is a small general hospital (PB 6M€). We chose 24 active ingredients (95 different antibiotics) that represent about 1/3 of total hospital antibiotics and 80% of the total antibiotics' budget. We studied their consumption for the years 2011 and 2012 and calculated the costs based on the official drug pricelist and their price after the negotiation. **RESULTS:** From 2011 to 2012 the discounts gained from each hospital were increased. Price negotiation does not apply in prototype drugs that their companies are only obliged to offer a 5% rebate. Unfortunately, these medications are more expensive, represent 36% of the studied antibiotics' cost and their consumption was increased by 20%. But, the discounts for all the studied off-patent drugs and their generics were from 12.8% till 89.9%. Thus, the total cost saving for them was 33.2% at PAGNI, 26.0% at Evaggelismos and 43.1% at Tzaneio. The total benefit for the pharmaceutical expenditure was 3% for both PAGNI and Evaggelismos, and 6% for Tzaneio. **CONCLUSIONS:** Price negotiation is an effective mean of decreasing the cost of off-patent and generic drugs but newer and expensive drugs get doctors' preference, undermining the Pharmacy's cost-saving effort.

PIN61

WHAT ARE THE CLINICAL AND ECONOMIC COSTS AND BENEFITS OF IMPLEMENTING POINT OF CARE TESTS FOR CHLAMYDIA TRACHOMATIS AND NEISSERIA GONORRHOEA IN GENITO-URINARY MEDICINE CLINICS IN THE UNITED KINGDOM?

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OBJECTIVES: To estimate the costs and benefits of patient pathways incorporating a point of care nucleic acid amplification test (POC NAAT) for chlamydia and gonorrhoea in genito-urinary medicine (GUM) clinics in the UK compared with standard off-site laboratory testing. **METHODS:** We simulated 1.2 million men and women GUM clinic attendees based on GUMCAD reports from the UK (2011). A Markov model with Monte Carlo simulation in Microsoft Excel was developed to compare existing standard pathways of testing and treatment for chlamydia and gonorrhoea with a POC NAAT. We conducted sensitivity analyses to evaluate the robustness of the model findings. The primary outcome was the incremental cost-effectiveness ratio (ICER = £/QALY). Secondary outcomes included the number of inappropriate treatments, complications and transmissions averted and change in time from test to treatment. **RESULTS:** The total cost of using the POCT in our cohort was £103.3 million compared with £113.9 million for standard care. The ICER was -£4,182/QALY, making the new pathways cost saving. Nearly 100,000 inappropriate treatments might be avoided by using a POC NAAT. Patients receive diagnosis and treatment on the same day as testing, which may also prevent 162 cases of pelvic inflammatory disease and 17,561 transmissions. **CONCLUSIONS:** Replacing standard laboratory tests for chlamydia and gonorrhoea with a POCT could be cost saving and patients would benefit from more accurate diagnosis and less unnecessary treatment. Overtreatment currently accounts for about a tenth of the reported treatments for chlamydia and gonorrhoea and POC NAATs would effectively eliminate the need for presumptive treatment.

PIN62

COST-EFFECTIVENESS OF CHILDHOOD ROTAVIRUS VACCINATION IN GERMANY

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OBJECTIVES: Rotavirus (RV) causes highly contagious gastroenteritis especially in children under five years of age. Since 2006, two RV-vaccines are available in Europe (Rotarix® and RotaTeq®). We evaluated the cost-effectiveness of these vaccines for the German health care setting, inter alia to support an informed decision-making concerning a potential vaccination-recommendation. **METHODS:** A Markov Model was developed to evaluate the cost-effectiveness from the statutory health insurance (SHI) (direct costs) and from the societal perspective (SHI plus indirect costs). Health outcomes considered were RV-cases prevented, RV-associated hospitalizations avoided, and quality-adjusted life-years (QALY) gained. RV-incidences were derived from the national mandatory disease reporting system. RV-vaccine efficacy was calculated as pooled estimates based on data from randomized controlled trials. Costs (reference year 2010) were derived from official price catalogues. An annual discount rate of 3% for effects and costs was applied. The first five life-years were considered as model's time horizon. **RESULTS:** The base-case analysis (SHI-perspective) resulted in an incremental cost-effectiveness and cost-utility ratio (ICER) for Rotarix® of € 184 per RV-case prevented, € 2,457 per RV-associated hospitalization avoided, and € 116,973 per QALY gained. For RotaTeq®, the results were slightly higher (€ 234, € 2,622, and € 142,732, respectively). In sensitivity analyses parameter variation showed effects on the ICERs without changing the overall trend. A threshold analysis suggests that cost-saving scenarios are possible with vaccine prices reduced by ~62-66%. When applying base-case scenario results to the 2012 birth-cohort with 80% vaccination coverage, an estimated 206,000-242,000 RV-cases and 18,000 RV-associated hospitalizations can be prevented in this birth-cohort over 5 years for an incremental cost of 44.5-48.2 million Euros. **CONCLUSIONS:** Routine RV-vaccination is expected to prevent a considerable number of RV-cases and RV-associated hospitalizations in Germany. Though, the amount of QALYs gained is low. With current vaccine prices, RV-vaccination is not a cost-saving preventive measure.

PIN63

COST-EFFECTIVENESS ANALYSIS OF 3 CANDINS AND FLUCONAZOLE IN THE TREATMENT OF CONFIRMED INVASIVE CANDIDIASIS IN ADULT NON-NEUTROPAENIC PATIENTS IN SPAIN

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OBJECTIVES: To estimate the cost-effectiveness (CE) of the 3 echinocandins (Anidulafungin, Caspofungin and Micafungin) and generic Fluconazole in the treatment of adult non-neutropaenic patients with invasive candidiasis (IC) in a Spanish Intensive Care Unit (ICU) setting. **METHODS:** A 4 arm decision tree model was developed with the 3 echinocandins and generic Fluconazole as first line treatment. In case of treatment failure, a 2nd line treatment was administered (Liposomal Amphotericin-B following the echinocandins and either one of the 3 echinocandins for Fluconazole arm). After 2nd line failure, treatment was discontinued. Total treatment length was 14 days. Efficacy and safety (adverse events/lack of efficacy) parameters where obtained from a mixed-treatment-comparison and a meta-analysis respectively. Efficacy was considered as first line success (Anidulafungin 75.32%; Micafungin 71.65%; Caspofungin 70.62%; and Fluconazole 56.7%). Length of the first and the second line were elicited using experts' opinion through Delphi methodology. Daily drug acquisition costs were considered only. The CE was expressed as an incremental cost-effectiveness ratio (ICER). Univariate sensitivity analyses were also applied and included, length of treatment in 1st or 2nd line and finally drug dosages calculated as per SmPC recommendations according to different patient characteristics. **RESULTS:** Total costs of IC treatment for Anidulafungin, Micafungin, Caspofungin and Fluconazole were €5,552; €5,985; €6,350; €1,654 respectively. Anidulafungin was dominant compared to Micafungin and Caspofungin. Anidulafungin and Micafungin were cost-effective (€20,934; 29.576€ respectively) compared to Fluconazole (CE threshold of €30,000). Sensitivity analyses revealed that ICER was sensitive to increases in the length of the 1st and 2nd line treatments, although Anidulafungin was cost-effective in all scenarios. **CONCLUSIONS:** Based on the model's assumptions, Anidulafungin is cost-saving compared to Micafungin and Caspofungin and cost-effective vs. Fluconazole in the treatment of patients with confirmed invasive candidiasis from a Spanish Hospital ICU perspective.

PIN64

COST-EFFECTIVENESS OF LINEZOLID VERSUS VANCOMYCIN IN THE TREATMENT OF VENTILATOR ASSOCIATED PNEUMONIA IN JAMAICA

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OBJECTIVES: The ventilator associated pneumonia (VAP) refers to the pneumonia that appears after 48-72 hours of endotracheal intubation and is the most common nosocomial infections in patients receiving mechanical ventilation. Late-onset VAP is responsible for prolonged ICU stay and higher mortality rates (24 to 50% and can even increase to 76%), which explains the importance of using more effective antibiotics depending on the severity of each case. The aim of this study is to assess the cost-effectiveness (CE) of linezolid against vancomycin in the treatment of VAP, from the public health care perspective. **METHODS:** A cohort of patients with VAP was simulated using a decision-tree model to compare costs and effectiveness of linezolid (600 mg/12 hours) and vancomycin (1 g/12 hours). Effectiveness measures were: microbiological success rates, mortality rates, and ICU and ward LOS. The model used a 12-week time horizon and only direct medical costs were considered (inpatient costs, medication expenses, adverse events costs). Effectiveness and epidemiologic data were retrieved from published literature. Local costs (2013 US$) were gathered from the official databases of Jamaican Health System. Monte Carlo probabilistic sensitivity analysis (PSA) was constructed. **RESULTS:** Linezolid resulted as the most effective and less expensive option for VAP adult patients. Clinical success rate was higher with linezolid (64.4%) against vancomicyn (56.1%). Mean expected ICU LOS was 14 days for linezolid and 17 days for vancomycin, ward LOS was 14 and 24 days with linezolid and vancomycin, respectively. Mortality rate was found lower in the linezolid arm (10.13%) in comparison to vancomycin (15.74%). Overall costs per patient were $36721.65 with linezolid and $40776.82 with vancomycin. In the CE incremental analysis, linezolid appeared as the cost-saving option. PSA outcomes support the robustness of these findings. **CONCLUSIONS:** Linezolid resulted as the cost-saving therapy for treating VAP adult patients in Jamaica.

PIN65

COST EFFECTIVENESS ANALYSIS OF BOCEPREVIR (BOC) ADDED TO PEGIFN/ RIBAVIRIN (P/R) VERSUS PEGIFN/RIBAVIRIN (CURRENT STANDARD OF CARE) FOR THE TREATMENT OF PATIENTS WITH GENOTYPE 1 CHRONIC HEPATITIS C IN GREECE

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OBJECTIVES: Boceprevir plus P/R has demonstrated a superior clinical profile, compared to P/R alone, in the treatment of genotype 1 chronic hepatitis C (G1-CHC) patients. The objective of this study was to evaluate the cost-effectiveness of BOC/P/R therapy for treatment naïve and treatment experienced G1-CHC patients in Greece. **METHODS:** A Markov-model simulating the quality-adjusted life years and corresponding costs of G1-CHC treatment provided the basis of the analyses. The BOC/P/R regimens recommended in the label for treatment naïve and treatment experienced patients were compared to P/R to calculate incremental costs and outcomes. The inputs for the model were derived from post-hoc subset analyses of SPRINT-2 and RESPOND-2 data. Resource use for patient monitoring and treatment of events was elicited via expert panel. Lifetime horizon with 3% discount rate was used and the perspective of analysis was third-party payers. **RESULTS:** BOC-based therapy was projected to reduce liver complications (decompensated cirrhosis, hepatocellular carcinoma, liver transplant and liver–related death) by 44% and 49-53% in treatment naïve and experienced patients, respectively, leading to corresponding gains of 0.87 and 1.25 QALYs per patient. Taking into account medication costs, treatment and management of events, the ICER for BOC-based therapy versus P/R were estimated at 10,003€/QALY and 10,852€/QALY for treatment naïve and experienced patients, respectively. Extensive sensitivity analyses indicated that results were robust. **CONCLUSIONS:** Based on the results of this analysis, the addition of Boceprevir to P/R for treatment of G1 CHC patients can be a cost-effective treatment option in the Greek health care setting.

PIN66

COST PER CURE OF TELAPREVIR AND BOCEPREVIR IN TREATMENT-NAÏVE GENOTYPE 1 HEPATITIS C PATIENTS WITH F2 FIBROSIS IN BRAZIL

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OBJECTIVES: Compare the cost per cure of telaprevir of peginterferon and ribavirin (TVR+PR) compared to boceprevir plus peginterferon and ribavirin (BOC+PR) in the treatment of METAVIR scale F2 patients with previously untreated chronic hepatitis C genotype 1 in the Brazilian public (SUS) and private (SS) health care system. **METHODS:** Treatment costs considered drug acquisition costs of TVR+PR and BOC+PR from a public and private payer perspective in Brazil. The cost/cure was defined as the cost/sustained virological response (SVR) according to the phase 3 trials of TVR and BOC. The SVR rate for TVR+PR was defined as 79% and 49% for PR in patients with F2 fibrosis. Based on the SPRINT-2 trial, the SVR-rate for F2 patients treated with BOC+PR was assumed 57%, average between F0/F1 and F3/F4 patients, compared to 38% for PR. Treatment duration, based on the extended rapid virological response (eRVR), was taken from the respective trials of BOC (eRVR = 44%) and TVR (eRVR = 58%). Deterministic sensitivity analysis was carried out for the eRVR rate. **RESULTS:** In the SUS, TVR+PR had an average treatment cost of R$ 40.093 per F2 fibrosis patient compared to R$ 36.185 with BOC+PR. Considering the SVR rate and the sensitivity analysis, TVR+PR had a cost/SVR of R$ 50.751 (R$ 49.797-R$ 51.705) compared to R$ 63.481 (R$ 61.771-R$ 65.191) with BOC+PR. In the private health care system, TVR+PR had a treatment cost of R$ R$ 88.508 per F2 fibrosis patient compared to R$ 82.518 with BOC+PR. Considering the cost/SVR and sensitivity analysis, TVR+PR had a cost/SVR of R$ 112.036 (R$ 108.253-R$ 115.819) compared to BOC+PR with a cost/SVR of R$ 144.768 (R$ 140.631-R$ 148.905) per F2 patient in the SS. **CONCLUSIONS:** Compared to BOC+PR, TVR+PR was a more cost-effective treatment of F2 fibrosis patients in both public and private health care systems.

PIN67

COST-EFFECTIVENESS OF PEGINTERFERON ALFA AND RIBAVIRIN FOR THE TREATMENT OF CHILDREN AND YOUNG PEOPLE WITH CHRONIC HEPATITIS C FROM THE PERSPECTIVE OF THE NHS IN ENGLAND AND WALES

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OBJECTIVES: To evaluate the cost-effectiveness of peginterferon (PEG INF) alfa and ribavirin for the treatment of children and young people ages 3 to 17 years with Chronic Hepatitis C (CHC), from the perspective of the NHS in England and Wales. This analysis was submitted to NICE as part of a submission dossier for the multiple technology appraisal of PEG INF alfa and ribavirin for the respective population. **METHODS:** A Markov model was developed based on previous economic evaluations for treatment of adults with CHC with PEG INF alfa and ribavirin. The model evaluated the cost-effectiveness of PEG INF alfa-2a or alfa-2b and ribavirin, and supportive care, for the treatment of people aged 5 to 17 years. An additional analysis was conducted on 3 and 4 year olds comparing supportive care to PEG INF alfa-2b and ribavirin in line with license. The cost-effectiveness was evaluated using the incremental cost-effectiveness ratio (ICER) from the perspective of the NHS over a lifetime horizon. The results were assessed overall and by age and genotype subgroups. **RESULTS:** The results reported that both combinations of PEG INF alfa and ribavirin dominated supportive care for all patients. Driven by small variation in the comparative efficacy and costs, the comparison between PEG INF alfa-2a and alfa-2b, in combination with ribavirin, showed that PEG INF alfa-2b dominated PEG INF alfa-2a overall and in the following subgroups: 5 to 8 years, 14 to17 years and genotypes 2/3. The ICER for the 9 to13 years subgroup was £4,697. PEG INF alfa-2a dominated PEG INF alfa-2b for the other genotype subgroup **CONCLUSIONS:** The results of the economic evaluation demonstrated that treatment with either combination of PEG INF alfa and ribavirin is a cost-effective treatment option for children and young people aged 3 to 17 years with CHC.

PIN68

COST-EFFECTIVENESS OF 13-VALENT VERSUS 10-VALENT PNEUMOCOCCAL CONJUGATE VACCINE USE IN THE CZECH NATIONAL IMMUNIZATION PROGRAM

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OBJECTIVES: Streptococcus pneumoniae is presumed to be the major etiology agent responsible for a significant amount of meningitis, bacteremia and sepsis (invasive pneumococcal disease; IPD) as well as Community Acquired Pneumonia (CAP) and Acute Otitis Media (AOM). The Czech Republic (CR), as well as many other European countries have only a limited local evidence on the underlying epidemiology. The objective was to estimate the expected outcomes, costs, cost-effectiveness of the pediatric national immunization program (NIP) with 13-valent pneumococcal conjugated vaccine (PCV13) and 10-valent pneumococcal conjugated vaccine (PCV10) as a comparator among specific populations of children and adults in preventing and reducing the incidence of IPD, CAP and AOM in CR. **METHODS:** A Markov decision-analytic model was developed to examine impacts of infant vaccination with PCV13 versus PCV10. PCV13 direct effectiveness was extrapolated from PCV7 efficacy data from clinical trials, using assumptions regarding serotype prevalence and PCV13 protection against additional serotypes, while indirect (herd) effect was extrapolated from US surveillance data following universal PCV7 use. The local epidemiology and cost data were used to achieve maximum national specificity. **RESULTS:** Model predicts incremental EUR 64.5 million for the PCV13 NIP from the payer's perspective in the 10-year horizon, as compared to PCV10. This would lead to an reduction in IPD, all cause inpatient and outpatient CAP and AOM by approximately 921, 22 900, 56 796 and 40 598 cases, respectively, thus savings EUR 35.4 million. This gives a total cost of EUR 29.0 million in the 10 years. The incremental cost per LYG or QALY gained is estimated as EUR 929 or EUR 1 164, respectively, from the payer's perspective as compared to PCV10. **CONCLUSIONS:** Comparing the national GDP per capita with the WHO